

REMARKS

Claims 1-4, 6-8, and 10-13 were pending in this application prior to the office action. By this amendment, claims 1 and 8 are amended and claims 2 and 11 are canceled. Thus, claims 1, 3-4, 6-8, 10, and 12-13 are now pending. In view of the above amendments and the following remarks, Applicants respectfully request reconsideration and allowance of the application.

Claims 1 to 4, 8 and 10 to 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,595,608 to Takebuchi et al. In addition, claims 6 and 7 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Japanese Patent Document No. 04-268051 to Ueda et al.

In particular, the Examiner asserts that Takebuchi teaches a method of making a sintered rare earth-iron-boron magnet having a composition that overlaps the claimed permanent magnet composition (column 14, lines 36 to 55) wherein a main phase rare earth alloy (column 8, lines 9 to 15) optionally containing Cr and C (column 8, lines 40 to 46) having a composition that overlaps the main phase alloy composition recited in the instant claims and a grain boundary phase having a composition that overlaps the composition of the grain boundary phase recited in the instant claims (column 10, lines 35 to 40) are mixed and sintered (column 20, line 50 to column 21, line 8).

The Examiner further asserts that Ueda teaches a method of making a rare earth-Fe-Co-B-C sintered magnet (Abstract), and adding Cr to the main phase of a rare earth sintered and C to the boundary layer phase of the sintered rare earth magnet. Thus, the Examiner asserts that Ueda teaches a main phase containing Cr as recited in the instant claims and a grain boundary phase containing C as recited in the instant claims. However, the Examiner also states that Ueda is silent as natural electrode potential of the disclosed composition, but asserts that one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the composition taught by Ueda has a composition that is encompassed by the instant claims.

However, Applicants respectfully disagree with the Examiner's assertions set forth above in view of the claims presented herein, and submit that neither Takebuchi nor Ueda

disclose, suggest, or render obvious the invention recited in claims 1, 3-4, 6-8, 10, and 12-13.

For example, claim 1 as amended requires that 50 at% to 90 at% of the grain boundary phase of the rare-earth sintered magnet is Co. According to the claimed magnet, the natural electrode potential of the grain boundary phase increases to -0.75 V or more, too, and the difference in natural electrode potential between the main and grain boundary phases can be reduced to at most 0.6 V, as described in the specification of the present application. Thus, it is possible to prevent corrosion from being produced by a cell reaction between the main and grain boundary phases.

In addition, with respect to claim 8, an alloy including a rare-earth element R and Co as its main ingredients is used as the liquid phase alloy so as to reduce the difference in natural electrode potential between the main and grain boundary phases. If the concentration of Co in the liquid phase alloy were less than 20 at%, the natural electrode potential of the resultant grain boundary phase would not become sufficiently high and the difference in natural electrode potential between the main and grain boundary phases would be too big to exhibit the corrosion resistance sufficiently. Nevertheless, if the concentration of Co in the liquid phase alloy exceeded 40 at%, then ferromagnetic RCO₂ would be easily produced in the grain boundary phase of the resultant sintered magnet, thus deteriorating the magnet performance unintentionally.

Neither Takebuchi nor Ueda disclose, suggest, or render obvious at least these features. Thus, Applicants respectfully submit that the rejections of claims 1, 3-4, 6-8, 10, and 12-13 under 35 U.S.C. § 102 and § 103 in view of Takebuchi and/or Ueda be reconsidered and withdrawn.

The present amendment is submitted in accordance with the provisions of 37 C.F.R. §1.116, which after Final Rejection permits entry of amendments placing the claims in better form for consideration on appeal. As the present amendment is believed to overcome outstanding rejections under 35 U.S.C. §102 and § 103, the present amendment places the application in better form for consideration on appeal. It is therefore respectfully requested that 37 C.F.R. §1.116 be liberally construed, and that the present amendment be entered.

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. If, however, the Examiner

deems that any issue remains after considering this response, the Examiner is invited to contact the undersigned attorney to expedite the prosecution and engage in a joint effort to work out a mutually satisfactory solution.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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